EXPERIMENTAL AGRICULTURE

VOLUME 11 1975

Editor

PROFESSOR J. P. HUDSON

Editorial Board

PROFESSOR E. W. RUSSELL (*Chairman*)

PROFESSOR D. K. BRITTON
PROFESSOR A. H. BUNTING
DR E. E. CHEESMAN
PROFESSOR J. D. IVINS
A. R. MELVILLE
D. RHIND
DR G. WATTS PADWICK
DR C. C. WEBSTER

CAMBRIDGE UNIVERSITY PRESS
1975

PUBLISHED BY

THE SYNDICS OF THE CAMBRIDGE UNIVERSITY PRESS

Bentley House, 200 Euston Road, London, NW1 2DB

32 East 57th Street, New York, N.Y. 10022

© Cambridge University Press 1975

Printed in Great Britain by Adlard & Son Ltd, Bartholomew Press, Dorking

CONTENTS

PART 1 (JANUARY 1975)

R. Z. Patel and A. M. Kabaara: Isotope Studies on the Efficient use of P-Fertilizers by *Coffea arabica* in Kenya. I. Uptake and Distribution of P^{32} from labelled KH_2PO_4 1

H. P. Bezbaruah: Interspecific Hybrids between Tea (*Camellia sinensis*) and Wilson's Camellia (*C. irrawadiensis*). I. Morphology and Cytology of F_1 Hybrids 13

H. F. Bezbaruah: Cytological Investigations of the Family Theaceae. II. Cytology of a Triploid Tea 17

B. T. Kang: Effects of Inoculation and Nitrogen Fertilizer on Soybean in Western Nigeria 23

J. Nothmann and D. Koller: Effects of Low-Temperature Stress on Fertility and Fruiting of Eggplant (*Solanum melongena*) in a Subtropical Climate 33

S. B. Lowe and L. A. Wilson: Yield and Yield Components of Six Sweet Potato (*Ipomoea batatas*) Cultivars. I. Contribution of Yield Components to Tuber Yield 39

S. B. Lowe and L. A. Wilson: Yield and Yield Components of Six Sweet Potato (*Ipomoea batatas*) Cultivars. II. Variability and Possible Sources of Variation 49

J. A. Rajaratnam and Law Ing Hock: Effect of Boron Nutrition on Intensity of Red Spider Mite Attack on Oil Palm Seedlings 59

D. N. Singh and A. Bhattacharya: Effect of Age of Seedlings at Transplanting on Growth and Yield of Rice Varieties (*Oryza sativa*) 65

Book Reviews:

Soil Testing and Plant Analysis (Revised): L. M. Walsh and J. D. Beaton 75

Breeding Plants for Disease Resistance: R. R. Nelson 75

Spices. Tropical Products Institute Conference Proceedings, 1972 76

Statistics for Biologists (2nd ed.): R. C. Campbell 77

Insects: Studies in Population Management. International Congress of Entomology; Canberra 1972: P. W. Geier, L. R. Clark, D. J. Anderson and H. A. Nix 77

Mineral Nutrition of Plants: Principles and Perspectives: Emanuel Epstein 78

Soil Conditions and Plant Growth (10th ed.): E. W. Russell 78

PART 2 (APRIL 1975)

J. R. Stow: Effects of Humidity on Losses of Bulb Onions (*Allium cepa*) Stored at High Temperature 81

H. M. Shelton and L. R. Humphreys: Undersowing Rice (*Oryza sativa*) with *Stylosanthes guyanensis*. I. Plant Density 89

H. M. Shelton and L. R. Humphreys: Undersowing Rice (*Orysa sativa*) with *Stylosanthes guyanensis*. II. Delayed Sowing Time and Crop Variety 97

H. M. Shelton and L. R. Humphreys: Undersowing Rice (*Orysa sativa*) with *Stylosanthes guyanensis*. III. Nitrogen Supply 103

G. B. Masefield: A Preliminary Trial of the Pearl Lupin in England 113

D. J. Andrews: Sorghum Grain Hybrids in Nigeria 119

R. A. Sobulo, A. A. Fayemi and A. Agboola: Nutrient Requirements of Tomatoes (*Lycopersicon esculentum*) in S.W. Nigeria. I. Effects of N, P and K on Yields 129

R. A. Sobulo, A. A. Fayemi and A. A. Agboola: Nutrient Requirements of Tomatoes (*Lycopersicon esculentum*) in S.W. Nigeria. II. Foliar Analysis for Assessing N, P and K Requirements 137

S. H. Salih and M. O. Khidir: Correlations, Path Analyses and Selection Indices for Castorbean (*Ricinus communis* L.) 145

A. H. El Nadi: Water Relations of Beans. III. Pod and Seed Yield of Haricot Beans under Different Irrigation in the Sudan 155

Book Reviews:

Biological Control of Plant Pathogens: K. F. Baker and R. J. Cook 159

Biological Control by Natural Enemies: P. DeBach 159

PART 3 (JULY 1975)

A. M. Yassin: Epidemics and Chemical Control of Leaf Curl Virus Disease of Tomato in the Sudan 161

Faisal M. Ali: Effects of Rainfall on Yield of Grain Sorghum in the Sudan 167

F. J. Olsen and G. L. Santos: Effects of Lime and Fertilizer on Natural Pastures in Brazil 173

John L. Hammerton: Effects of Defoliation on Pigeon Peas (*Cajanus cajan*) 177

M. A. V. Devanathan: Weather and the Yield of a Crop 183

M. Bigger: Susceptibility of two Cocoa Progenies to Attack by Insect Species. I—Proportion of Trees Infested 187

M. Bigger: Susceptibility of two Cocoa Progenies to Attack by Insect Species. II—Effects of Canopy Size on Numbers of Mealybugs 193

J. R. Stow: Resistance of 20 Cultivars of Onions (*Allium cepa*) to Rotting and Sprouting during High-Temperature Storage 201

D. K. Das Gupta: Effects of Cycocel on Crop Plants in Sierra Leone. I. Groundnut (*Arachis hypogea*) 209

M. A. El Fawal, A. F. El Okkia, A. A. Abdel-Bary and A. A. El-Khishen: Effects of Planting Date and Seeding Rate on Egyptian Cotton (*Gossypium barbadense*) 215

U. R. Pal and M. C. Saxena: Responses of Soybean to Symbiosis and Nitrogen Fertilization Under Humid Sub-Tropical Conditions 221

A. H. Kassam and D. J. Andrews: Effects of Sowing Date on Growth, Development and Yield of Photosensitive Sorghum at Samaru, Northern Nigeria 227

PART 4 (OCTOBER 1975)

John L. Hammerton: Effects of Growth Regulators on Pigeon Pea (*Cajanus cajan*) 241

Guy E. Wilkinson: Rainfall Characteristics and Soil Erosion in the Rainforest Area of Western Nigeria 247

D. Thomas and A. J. Bennett: Establishing a Mixed Pasture under Maize in Malawi. I. Time of Sowing 257

A. R. Bromfield: Effects of Ground Rock Phosphate-Sulphur Mixture on Yield and Nutrient Uptake of Groundnuts (*Arachis hypogaea*) in Northern Nigeria 265

D. Thomas and A. J. Bennett: Establishing a Mixed Pasture under Maize in Malawi. II. Method of Sowing 273

Martin E. Adams: A Development Plan for Semi-Arid Areas in Western Sudan 277

F. J. Olsen, G. Hamilton and D. M. Elkins: Effect of Nitrogen on Nodulation and Yield of Soybean 289

E. F. I. Baker: Effects and Interactions of 'Package Deal' Inputs on Yield and Labour Demand of Maize 295

P. T. S. Whiteman: Moisture Conservation by Fallowing in Botswana 305

T. N. Khan and J. M. Ashley: Factors Affecting Plant Stand in Pigeon Pea 315

Book Reviews:

Handbook of Selection and Seed Growing of Oil Plants: E. S. Bunting 323

An Annotated Bibliography of Colour Illustrated Mineral Deficiency Symptoms in Tropical Crops: C. C. Webster 324

Phytophthora Disease of Cocoa: Paul Holliday 324
Pest Control in Groundnuts: R. G. Fennah 325
World Protein Resources: D. Wilson 326
Corn; Its Origin, Evolution and Improvement: E. S. Bunting 326
Index 329